

3M 3M™ RBE Loose Fitting PAPR CBRN Upgrade Kit RBE-HUP

User Instructions

User Instructions for Upgrade Kit RBE-HUP: for Systems FR-57L10 and FR-57N10.

General Purpose: The RBE-HUP upgrade kit, along with the inspection steps outlined in this *User Instruction*, are intended to upgrade the FR-57L10 and FR-57N10 systems to a NIOSH CBRN approved PAPR. **Failure to follow the steps outlined in this *User Instruction* may adversely affect respirator performance and result in sickness or death.**

⚠ WARNING

Each person using this respirator upgrade kit must read and understand the information in these *User Instructions* before use. Use of respirators by untrained or unqualified persons, or use that is not in accordance with these *User Instructions*, **may adversely affect respirator performance and result in sickness or death.**

Do not use with parts or accessories other than those manufactured by 3M as described in these *User Instructions* or on the NIOSH approval label for this respirator. Do not attempt to repair or modify any component of the system except as described in these *User Instructions*. **Failure to do so may adversely affect respirator performance and result in sickness or death.**

STEP 1. Upgrade Kit Components

1. Check to ensure that your RBE-HUP upgrade kit contains the following components;
 - a. Decon Belt – RBE-BLT
 - b. RBE-57 - Cartridges
 - c. User Instructions (Breathe Easy Turbo, BE-10BR, Batteries)
 - d. Breathing Tube with Clamp – RBE-BTH
 - e. Upgrade Label
 - f. NIOSH CBRN respirator approval label.

Compatibility of BE-10BR/522-02-23 Butyl Rubber Hood, Breathe Easy™ Turbo Unit and Batteries

In order to ensure that your existing system is compatible for upgrade, the following steps must be followed.

STEP 2. BE-10BR Label

1. Ensure that product label sewn into the front of the inner shroud matches Fig. 1 or Fig. 2. If the labels are not legible, then the hood should not be used in the upgraded system.

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Fig. 1



Fig. 2

2. If label does not match Fig. 1 or Fig. 2, then the hood should not be used for the upgraded system.
3. Check the manufacturing date printed on the label. If printed date is earlier than MAY 2000, the hood CANNOT be used in an upgraded CBRN PAPR system.

STEP 3. BE-10BR Butyl Rubber Hood Inspection

1. Check that there are no tears, rips or cracks in the hood assembly.
2. Look closely at the stitching. There should be no tears or holes that could permit contaminated air to enter the hood.
3. Sealant along seams and along the visor interface to butyl fabric should be intact.
4. Face shield should be free of dents or cracks.
5. If the hood fails any one of the previous inspection steps it should not be used.

STEP 4. BATTERIES

1. The BP-15 NiMH battery with BC-210 charger and Lithium Primary battery, 520-04-57, are the only NIOSH CBRN approved batteries for the RBE-L10 and RBE-NM10 systems.

STEP 5. Breathe Easy™ Turbo Unit Inspection

1. Remove the filters/cartridges or canisters.
2. Examine the blower housing for cracks. Replace if cracked or damaged.
3. Examine the inside of the blower intake manifold (note the red and white wires). The presence of dust or other particulate matter inside the manifold or on the wires may indicate a damaged filter, improper seating

of the filter/cartridge/canister, or incorrect filter/cartridge/canister selection. Contact 3M Technical Service for assistance.

4. Examine the outside of the battery pack for cracks. Replace if damaged.

STEP 6. Breathe Easy™ Turbo Unit Labels

1. Front label should match Fig. 3 and back label should match Fig. 4 or 5. If labels on existing Breathe Easy PAPER unit do not match figures 3-5, purchase new Turbo Motor Blower Assembly (022-00-03).



Fig. 3



Fig. 4

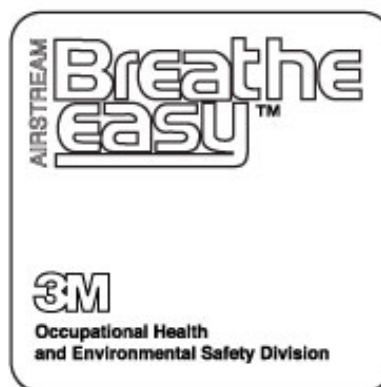
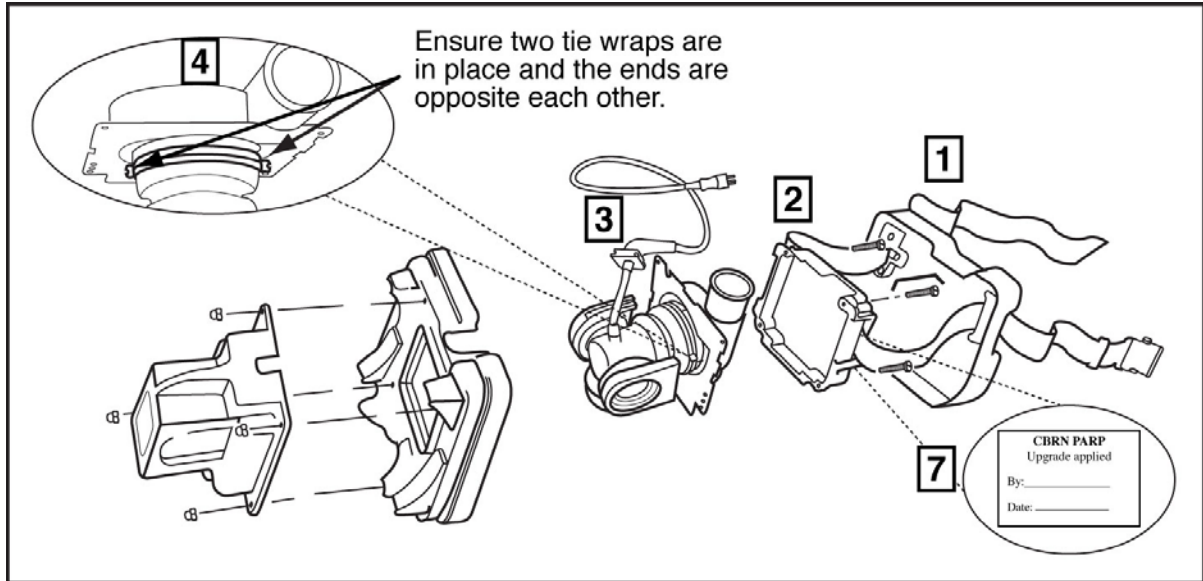


Fig. 5

STEP 7. Inspect Tie Wraps on Blower

1. Remove existing Breathing Tube and Cartridges. Remove the back cover of the Turbo Motor Blower Assembly and remove assembly from the web belt.
2. Remove the back plate of the Turbo Motor Blower Assembly by loosening and removing four screws and bolts.
3. Remove motor blower unit from plastic housing as shown in Diagram 1.
4. Inspect motor blower unit to ensure that two tie wraps are in place as shown by arrows on blowup view of Diagram 1.

Diagram 1



5. If only one tie wrap is in place or the tie wraps are not positioned facing away from each other the Turbo Motor Blower Assembly **cannot** be upgraded to meet CBRN NIOSH PAPP standard. Purchase new Turbo Motor Blower Assembly (022-00-03).
6. If two tie wraps are in place and configured correctly as pointed out in Diagram 1 –picture #4, replace motor blower unit into plastic housing.
7. Replace back plate cover and attach upgrade label to the outside of the back plate (Fig. 6).

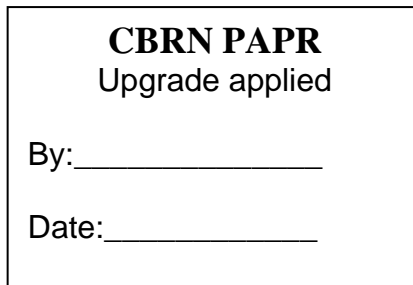


Fig. 6

STEP 8. Connecting Belt to Turbo PAPP Unit

1. Remove the back cover of the Turbo PAPP Unit. Note: back cover snaps off retaining posts.
2. Thread the belt through the rear cover and fit the cover on to the back of the filter carrier assembly (Fig. 7).

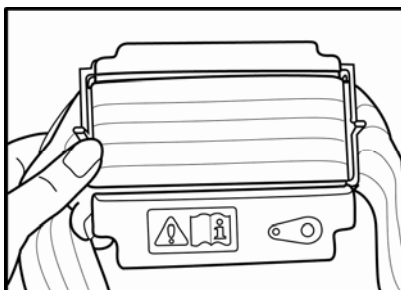


Fig. 7

3. Thread the belt through the slots on the rear cover and snap the back cover onto the assembly (Fig. 8).

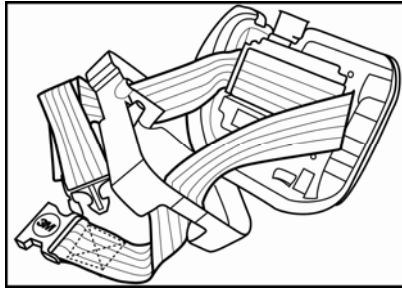


Fig. 8

4. Pull the whole belt to the right or left through the Turbo PAPR Unit's bracket so the buckle centers at your waist (in front) and the Turbo PAPR Unit is behind you.

STEP 9. Connecting the Breathing Tube to the Turbo PAPR Unit

1. Carefully examine the entire breathing tube. Inspect the breathing tube for tears, holes, cracks, punctures or excessive wear. Replace as necessary.
2. Bend the tube to verify that it is flexible.
3. Place the hose clamp onto the free end of the breathing tube. (Fig. 9)
4. Slide that end of the breathing tube over the Turbo PAPR unit outlet until it seats firmly against the motor blower housing. (Fig. 10)
5. Finger tighten clamp. **DO NOT OVER TIGHTEN.** Ensure that the breathing tube is secured to the Turbo PAPR unit outlet and that the end of the breathing tube is visible between the Turbo PAPR unit and the hose clamp. (Fig. 11)

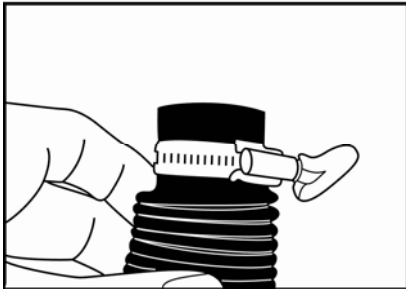


Fig. 9

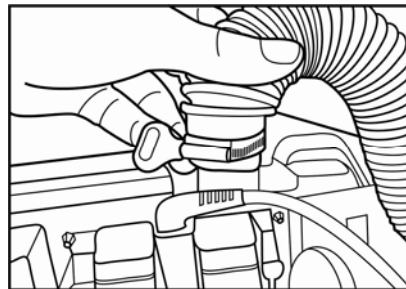


Fig. 10

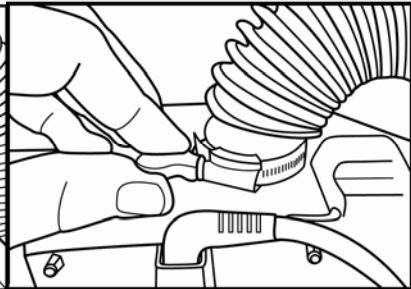


Fig. 11

STEP 10 (OPTIONAL). Attaching Cartridges

1. When ready to use the cartridges, remove them from their packaging and verify that they are RBE-57s. Note: Use By Date is based on the cartridges remaining sealed. Once opened the carbon capacity will begin to decrease. The amount the capacity decreases will depend on humidity, chemical exposure and time.
2. Remove screw caps from cartridge and retain them for future use.
3. Ensure that the air inlet insert is seated inside each of the three rubber air inlets on the Turbo unit and that the threads and sealing surfaces are free of dirt and debris. (Fig. 12)
4. Screw a RBE-57 cartridge loosely into each of the three threaded inlets.

5. When all three RBE-57 cartridges are in place, **hand-tighten** so an airtight seal is achieved between the neck of each cartridge and the rubber molding inside the threaded inlet.

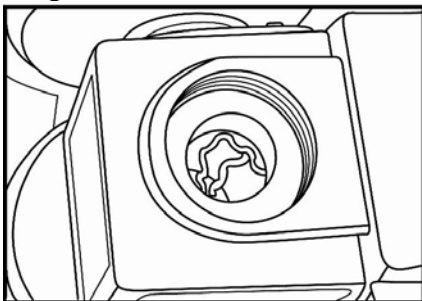


Fig. 12

WARNING

Do not over-tighten filter/cartridge/canister. Over-tightening may result in distortion or displacement of the seal and may allow contaminated air to enter the respirator headpiece and **may result in sickness or death.**

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6. Dispose of used cartridges in accordance with applicable regulations.
7. Ensure that all plugs are removed from cartridge ends before using the system. Retain the plugs for later use.

Upgrade Check List

The following steps must be successfully completed to ensure that the upgrade is complete.

- BE-10BR (522-02-23) label is legible, intact and matches figures. (STEP 2)
- Manufacturing date on BE-10BR hood is May 2000 or later. (STEP 2)
- BE-10BR passed inspection criteria. (STEP 3)
- System will be used with BP-15 or 520-04-57 batteries only. (STEP 4)
- Breathe Easy™ Turbo Unit passed inspection criteria. (STEP 5)
- Labels on Turbo Unit match figures. (STEP 6)
- Motor Blower tie wrap inspection criteria met. (STEP 7)
- Label placed on back plate cover of Turbo Unit. (STEP 7)
- Decon Belt installed per instructions. (STEP 8)
- Breathing Tube installed per instructions. (STEP 9)
- RBE-57 cartridges installed or instruction reviewed. (OPTIONAL. STEP 10)

Assembly and Operation

Refer to Breathe Easy™ Turbo PAPR Assembly User Instructions for assembly and operation of complete system.

For More Information

In United States, contact:

Website: www.3M.com/OccSafety

Technical Assistance: 1-800-243-4630

For other 3M products:

1-800-3M-HELPS or 1-651-737-6501

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